



PRELIMINARY REPORT
INDUSTRY SERIES

1987
**Census of
Manufactures**

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COMMERCIAL PRINTING AND MANIFOLD BUSINESS FORMS

Industries 2752, 2754, 2759, and 2761

INTRODUCTION

This report presents preliminary statistics from the 1987 Census of Manufactures for those establishments classified in the industries listed above. These data will be superseded by a more comprehensive final paperbound report. The method of data collection and use of administrative data are discussed in detail in the appendix.

All dollar figures included in this report are at prices current for the year specified and, therefore, unadjusted for changes in price levels. Consequently, when making comparisons to prior years, users should take into consideration the inflation that has occurred.

The definitions of these industries are the same as those used in the 1987 Standard Industrial Classification (SIC) Manual.¹

**INDUSTRY 2752, COMMERCIAL PRINTING,
LITHOGRAPHIC**

In the 1987 Census of Manufactures, Industry 2752, Commercial Printing, Lithographic, had employment of 402.5 thousand. The employment figure was 29 percent above the 311.9 thousand reported in 1982.

The total receipts for establishments classified in this industry was \$32.7 billion.

In 1987, establishments in this industry accounted for 94 percent of products considered primary to the industry regardless of the industry in which they were produced

(coverage ratio). In 1982, the coverage ratio was 93. The products primary to this industry appear in table 2 and aggregated to \$31.9 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$14.5 billion in 1987. Data on specific materials consumed appear in table 3.

**INDUSTRY 2754, COMMERCIAL PRINTING,
GRAVURE**

In the 1987 Census of Manufactures, Industry 2754, Commercial Printing, Gravure, had employment of 23.8 thousand.

The total receipts for establishments classified in this industry was \$3.1 billion.

In 1987, establishments in this industry accounted for 94 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$2.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$1.5 billion in 1987. Data on specific materials consumed appear in table 3.

**INDUSTRY 2759, COMMERCIAL PRINTING,
N.E.C.**

In the 1987 Census of Manufactures, Industry 2759, Commercial Printing, N.E.C., had employment of 125.7 thousand.

The total receipts for establishments classified in this industry was \$9.0 billion.

¹Standard Industrial Classification Manual: 1987. For sale by Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402. Stock No. 041-001-00314-2.

Address inquiries to Bureau of the Census, Industry Division, Washington, DC 20233, or call Sue Sundermann (301) 763-2510.



U.S. Department of Commerce
BUREAU OF THE CENSUS

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Printing Office, Washington, DC 20402.



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In 1987, establishments in this industry accounted for 88 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). The products primary to this industry appear in table 2 and aggregated to \$9.1 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$3.7 billion in 1987. Data on specific materials consumed appear in table 3.

INDUSTRY 2761, MANIFOLD BUSINESS FORMS

In the 1987 Census of Manufactures, Industry 2761, Manifold Business Forms, had employment of 53.0 thousand. The employment figure was 7 percent above the 49.5 thousand reported in 1982. Compared with 1986, employment in 1987 decreased 2 percent. The 1986 data are based on the Bureau's annual survey of manufactures (ASM), which is a sample survey conducted each year between censuses.

The total value of shipments for establishments classified in this industry was \$7.3 billion.

In 1987, establishments in this industry accounted for 97 percent of products considered primary to the industry regardless of the industry in which they were produced (coverage ratio). In 1982, the coverage ratio was also 97. The products primary to this industry appear in table 2 and aggregated to \$6.7 billion in 1987.

The cost of materials and services used by establishments in this industry amounted to \$3.5 billion in 1987. Data on specific materials consumed appear in table 3.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used in the tables in this publication:

-	Represents zero.
(D)	Withheld to avoid disclosing data for individual companies; data are included in higher level totals.
(NA)	Not available.
(NC)	Not comparable.
(S)	Withheld because estimate did not meet publication standards on the basis of either the response rate or a consistency review.
(X)	Not applicable.
(Z)	Less than half the unit shown.
do	Ditto.
n.e.c.	Not elsewhere classified.
n.s.k.	Not specified by kind.
pt.	Part.
r	Revised.
SIC	Standard Industrial Classification.

Other abbreviations, such as lb, gal, yd, doz, bbl, and s tons, are used in the customary sense.

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Table 1. Historical Statistics for the Industry: 1987 and Earlier Years

[Excludes data for auxiliaries. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see appendix.]

Year ¹	All establishments ³			All employees		Production workers			Value added by manufacture ⁴ (million dollars)	Cost of materials (million dollars)	Value of shipments (million dollars)	New capital expenditures (million dollars)	End-of-year inventories ⁴ (million dollars)	Ratios	
	Companies ² (no.)	Total (no.)	With 20 employees or more (no.)	Number (1,000)	Payroll (million dollars)	Number (1,000)	Hours (millions)	Wages (million dollars)						Specialization (per- cent)	Coverage (per- cent)
INDUSTRY 2752, COMMERCIAL PRINTING, LITHOGRAPHIC															
1987 Census	(NA)	24 765	4 064	402.5	9 115.0	292.7	582.5	5 877.7	18 152.2	14 549.7	32 658.1	1 540.5	2 390.7	94	94
1986 ASM	(NA)	(NA)	(NA)	337.0	7 513.3	247.9	487.5	4 897.0	14 819.2	11 598.9	26 371.1	1 335.9	1 920.9	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	335.4	7 097.5	248.2	472.7	4 744.7	13 949.0	11 079.8	25 024.8	1 410.7	1 928.3	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	334.9	6 841.5	249.0	473.8	4 550.3	13 271.2	10 485.0	23 648.2	1 279.7	1 961.8	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	315.1	6 052.1	238.9	440.1	4 131.5	11 741.8	9 025.3	20 754.0	962.7	1 661.1	(NA)	(NA)
1982 Census	17 332	17 842	3 184	311.9	5 746.4	234.1	434.8	3 931.9	11 045.1	8 406.4	19 441.6	958.1	1 524.1	91	93
1981 ASM	(NA)	(NA)	(NA)	261.2	4 596.1	197.5	377.4	3 095.5	8 616.9	6 595.1	15 173.7	794.4	1 154.7	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	257.9	4 173.9	195.8	366.0	2 823.6	7 720.3	5 847.7	13 561.4	619.3	1 141.0	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	250.2	3 781.5	191.2	360.2	2 574.1	6 973.9	5 334.6	12 244.7	559.9	1 107.3	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	227.3	3 277.6	172.0	320.8	2 246.8	5 888.5	4 630.6	10 505.0	438.7	945.4	(NA)	(NA)
1977 Census	10 959	11 320	2 362	216.3	2 984.1	163.7	307.4	2 045.7	5 338.4	1 061.6	9 359.7	360.2	861.9	87	88
1976 ASM	(NA)	(NA)	(NA)	193.7	2 490.5	145.6	286.5	1 704.7	4 408.5	3 312.9	7 705.0	238.0	659.9	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	189.0	2 256.9	142.0	267.3	1 537.1	3 853.0	2 902.3	6 751.3	226.6	599.6	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	188.1	2 121.3	142.0	271.0	1 466.9	3 705.7	2 615.1	6 297.9	204.3	634.3	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	192.3	2 010.1	147.8	279.9	1 405.4	3 511.1	2 229.1	5 721.5	238.0	490.7	(NA)	(NA)
1972 Census	8 161	8 386	2 135	164.0	1 835.3	139.6	264.2	1 266.2	3 155.1	1 992.7	5 124.8	220.6	373.5	87	88
INDUSTRY 2754, COMMERCIAL PRINTING, GRAVURE ⁵															
1987 Census	(NA)	331	92	23.8	668.5	19.1	39.4	494.2	1 534.2	1 545.4	3 059.7	174.2	292.8	85	94
INDUSTRY 2759, COMMERCIAL PRINTING, N.E.C. ⁵															
1987 Census	(NA)	10 096	1 382	125.7	2 480.6	88.5	173.3	1 498.5	5 290.5	3 695.1	8 951.8	297.7	788.4	92	88
INDUSTRY 2761, MANIFOLD BUSINESS FORMS															
1987 Census	(NA)	847	583	53.0	1 272.9	37.1	76.6	819.8	3 871.5	3 468.6	7 330.4	207.1	800.9	94	97
1986 ASM	(NA)	(NA)	(NA)	54.2	1 272.0	37.9	80.0	826.9	3 676.1	3 337.1	6 985.1	212.9	774.3	(NA)	(NA)
1985 ASM	(NA)	(NA)	(NA)	54.2	1 199.6	38.6	80.1	794.7	3 469.6	3 195.6	6 669.0	218.3	675.2	(NA)	(NA)
1984 ASM	(NA)	(NA)	(NA)	53.8	1 116.5	39.1	79.9	750.2	3 203.8	3 132.4	6 297.3	180.9	737.1	(NA)	(NA)
1983 ASM	(NA)	(NA)	(NA)	47.7	981.7	34.5	68.4	656.5	2 667.5	2 659.2	5 310.7	99.5	618.2	(NA)	(NA)
1982 Census	582	810	530	49.5	934.0	36.2	71.1	634.3	2 490.7	2 563.1	5 058.7	135.4	571.9	96	97
1981 ASM	(NA)	(NA)	(NA)	48.4	859.6	35.8	70.9	570.2	2 394.3	2 363.5	4 734.7	*139.6	518.8	(NA)	(NA)
1980 ASM	(NA)	(NA)	(NA)	49.2	784.5	36.9	72.7	525.5	2 183.7	2 100.7	4 279.0	*168.1	499.6	(NA)	(NA)
1979 ASM	(NA)	(NA)	(NA)	50.2	710.3	38.3	74.2	490.1	2 051.5	1 907.5	3 929.1	*119.4	477.8	(NA)	(NA)
1978 ASM	(NA)	(NA)	(NA)	46.7	634.5	34.8	68.7	433.1	1 692.2	1 616.4	3 296.5	122.8	386.7	(NA)	(NA)
1977 Census	604	795	477	45.3	575.0	33.3	67.3	390.9	1 491.6	1 418.0	2 893.8	82.1	336.7	93	95
1976 ASM	(NA)	(NA)	(NA)	38.8	468.0	29.2	58.4	317.1	1 201.7	1 132.9	2 327.9	58.6	289.6	(NA)	(NA)
1975 ASM	(NA)	(NA)	(NA)	40.2	440.1	29.8	58.4	292.0	1 155.5	1 024.7	2 184.9	74.6	283.2	(NA)	(NA)
1974 ASM	(NA)	(NA)	(NA)	44.5	445.8	33.8	67.9	309.4	1 325.1	1 013.8	2 304.6	67.4	348.9	(NA)	(NA)
1973 ASM	(NA)	(NA)	(NA)	40.9	385.6	30.6	62.5	264.8	978.6	739.9	1 708.4	52.2	196.6	(NA)	(NA)
1972 Census	533	667	376	38.6	343.6	28.8	58.6	235.2	823.6	612.3	1 429.7	45.8	143.8	93	92

Note: Establishments of single unit companies with up to 20 employees (cutoff varied by industry) were excluded from the mail portion of the census. Data for these establishments (and a small number of larger establishments whose reports were not received at the time the data were tabulated) were estimated based on administrative-record information from other agencies in conjunction with industry averages. These establishments accounted for the following percent of total value of shipments: SIC 2752, 23%; SIC 2754, 5%; SIC 2759, 30%; and SIC 2761, 12%.

¹In annual survey of manufactures (ASM) years, data are estimates based on a representative sample of establishments canvassed annually and may differ from results of a complete canvass of all establishments. ASM publication shows percentage standard errors. Unless otherwise noted, for data prior to 1972, see 1972 Census of Manufactures, vol. II, table 1a of the industry chapter.

²For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

³Includes establishments with payroll at any time during year.

⁴Beginning with the 1982 Census of Manufactures, all respondents were requested to report their inventories at the (lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior Censuses and annual surveys of manufactures in which respondents were permitted to value their inventories using any generally accepted accounting method. Consequently, inventories and value added by manufacture are not comparable to prior-year data.

⁵Industry definition is new for 1987 Census of Manufactures. An explanation of the Standard Industrial Classification revision will appear in the final industry series text that supercedes this report.

⁶Estimates for new capital expenditures have associated standard error of 15 percent or more and may be of limited reliability. Estimates for other data items are of acceptable reliability.

Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text.]

1987 product code	Product	1987		1982	
		Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)
2752- —	COMMERCIAL PRINTING, LITHOGRAPHIC (OFFSET)				
	Total	(NA)	31 904.7	(NA)	18 777.9
27521 —	Magazine and periodical printing (lithographic)	(NA)	3 838.5	(NA)	2 536.2
	Magazines and periodicals (excluding magazine and comic supplements for Sunday newspapers):				
27521 12	Sheet-fed	(NA)	610.9	421	409.7
27521 14	Web-fed	(NA)	2 803.5	209	1 828.2
27521 17	Magazine and comic supplements for Sunday newspapers	(NA)	173.7	22	50.0
27521 00	Magazine and periodical printing (lithographic), n.s.k.	(NA)	450.4	(NA)	248.3

See footnotes at end of table.

Table 2. **Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—**
Con.

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987		1982	
		Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)
2752- —	COMMERCIAL PRINTING, LITHOGRAPHIC (OFFSET)—Con.				
27522 —	Label and wrapper printing (lithographic)	(NA)	791.9	(NA)	677.0
	Printed labels, custom and stock, including bordered:				
	Made of paper:				
27522 15	Flat (except pressure-sensitive)	(NA)	392.3	(NA)	541.9
27522 19	Rolls (except pressure-sensitive)	(NA)	19.1		
27522 18	Pressure-sensitive (self-adhesive)	(NA)	90.7		
27522 16	Marginally punched, all types	(NA)	17.7		
27522 20	Made of other materials, except cloth	(NA)	8.1		
	Printed rolls and sheets (except bags, envelopes, pouches, etc.) for packaging purposes (printing only):				
27522 34	Paper (single-web)	(NA)	71.3	31	49.1
27522 43	Other, including multiweb structures	(NA)	38.3	5	20.5
27522 00	Label and wrapper printing (lithographic), n.s.k.	(NA)	154.4	(NA)	65.4
27523 —	Catalog and directory printing (lithographic)	(NA)	2 825.5	(NA)	1 804.2
	Catalogs (including direct mail):				
27523 12	Sheet-fed	(NA)	439.6	501	369.7
27523 14	Web-fed	(NA)	1 326.1	186	760.1
27523 13	Directories:				
	Telephone	(NA)	850.4	(NA)	300.1
	Other, including business reference services:				
27523 24	Sheet-fed	(NA)	65.6	70	41.6
27523 26	Web-fed	(NA)	94.7	44	97.1
27523 00	Catalog and directory printing (lithographic), n.s.k.	(NA)	246.8	(NA)	235.6
27524 —	Financial and legal printing (lithographic)	(NA)	1 556.7	(NA)	957.5
	SFC filing and prospectuses:				
27524 12	Sheet-fed	(NA)	117.5	49	87.2
27524 14	Web-fed	(NA)	265.1	22	102.7
	Annual reports and other corporate financial printing:				
27524 16	Sheet-fed	(NA)	279.1	233	185.3
27524 18	Web-fed	(NA)	178.5	45	70.2
	Other financial and legal printing, including insurance forms, security certificates, briefs, etc.:				
27524 21	Sheet-fed	(NA)	94.9	140	126.9
27524 22	Web-fed	(NA)	61.8	29	37.3
	Bank printing, including deposit slips, counter checks, business checks, imprinting of bank checks, etc., excluding checkbooks:				
27524 24	Sheet-fed	(NA)	80.1	67	96.9
27524 26	Web-fed	(NA)	71.9	26	91.9
27524 27	Bank form printing, including printing of passbooks, debit and credit slips, ledger and statement sheets, installment-loan coupon books, etc., excluding checkbooks	(NA)	61.6	53	35.7
27524 00	Financial and legal printing (lithographic), n.s.k.	(NA)	326.0	(NA)	123.3
27525 —	Advertising printing (lithographic)	(NA)	9 581.5	(NA)	4 985.1
	Direct mail, including circulars, letters, pamphlets, cards, and printed envelopes:				
27525 12	Sheet-fed	(NA)	1 244.4	806	665.5
27525 14	Web-fed	(NA)	1 255.7	241	594.0
27525 23	Display advertising:				
	Posters, including outdoor advertising, car cards, window counter, floor displays, point-of-purchase, and other printed display material:				
27525 26	Sheet-fed	(NA)	389.9	153	132.8
27525 28	Web-fed	(NA)	44.6	25	19.8
	Preprinted newspaper inserts (advertising supplements not regularly issued):				
27525 32	Rolls, including hi-fi and spectacular	(NA)	194.7	73	154.3
27525 33	Sections (2 pages or more)	(NA)	1 041.0	(NA)	774.3
27525 41	Shopping news	(NA)	165.6	99	74.1
	Other advertising printing, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, etc.:				
27525 51	Sheet-fed	(NA)	2 257.8	1 008	1 286.1
27525 53	Web-fed	(NA)	1 272.7	223	494.7
27525 00	Advertising printing (lithographic), n.s.k.	(NA)	1 582.5	(NA)	823.0
27526 —	Other general job printing (lithographic)	(NA)	5 513.2	(NA)	3 343.3
27526 11	Newspapers	(NA)	666.2	(NA)	540.3
	Scientific and technical recording charts and chart paper (containing preprinted grids and scale markings), except pen ruled:				
27526 16	Sheet-fed	(NA)	40.0	49	53.1
27526 18	Web-fed	(NA)	24.9	11	19.5
27526 21	Map, atlas, and globe cover printing, including road maps and strip maps ..	(NA)	49.2	25	25.7
	Calendars and calendar pads:				
27526 36	Sheet-fed	(NA)	105.3	91	76.5
27526 38	Web-fed	(NA)	34.6	22	67.1
27526 44	Ticket, coupon, and food and beverage check printing, including transportation and amusement	(NA)	59.4	43	49.9
27526 47	Playing cards, printed	(NA)	57.4	9	72.2
27526 51	Decalcomanias and pressure-sensitive (self-adhesive), including bumper stickers, etc., except labels	(NA)	14.4	30	44.3
27526 71	Trading stamps and all types of seals, including private and decorative stamps	(NA)	21.6	5	30.6
	Printing on metal:				
27526 76	Sheet-fed	(NA)	230.2	10	70.2
27526 78	Web-fed	(NA)	4.7	4	14.8
27526 83	Credit and identification cards printed (plastics, paper laminations, etc.) ...	(NA)	31.8	27	48.6
	Business forms, n.e.c., excluding blankbooks and looseleaf forms:				
27526 92	Sheet-fed	(NA)	211.2	265	148.8
27526 94	Web-fed	(NA)	143.5	82	97.1
27526 95	Art reproductions and picture prints	(NA)	59.5	50	27.5
27526 96	Quick printing	(NA)	430.5	320	132.2

See footnotes at end of table.

Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—
Con.

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987		1982	
		Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)
2752- —	COMMERCIAL PRINTING, LITHOGRAPHIC (OFFSET)—Con.				
27526 —	Other general job printing (lithographic)—Con.				
27526 98	All other general commercial lithographic printing, n.e.c.:				
27526 99	Sheet-fed	(NA)	1 562.1	678	757.8
27526 00	Web-fed	(NA)	393.5	96	114.5
	Other general job printing (lithographic), n.s.k.	(NA)	1 373.2	(NA)	952.6
27520 —	Commercial printing, lithographic, n.s.k.	(NA)	7 795.3	(NA)	4 474.7
27520 00	Commercial printing, lithographic, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	6 194.6	(NA)	3 188.0
27520 02	Commercial printing, lithographic, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	1 600.7	(NA)	1 286.7
2754- —	COMMERCIAL PRINTING, GRAVURE				
	Total	(NA)	2 741.4	(NA)	2 159.0
27541 —	Magazine and periodical printing (gravure)	(NA)	562.1	(NA)	521.0
27541 33	Magazines and periodicals (excluding magazine and comic supplements for Sunday newspapers)	(NA)	428.7	11	334.3
27541 35	Magazine and comic supplements for Sunday newspapers	(NA)	108.3	6	180.3
27541 00	Magazine and periodical printing (gravure), n.s.k.	(NA)	25.1	(NA)	6.4
27542 —	Label and wrapper printing (gravure)	(NA)	434.4	(NA)	437.4
	Printed labels, custom and stock, including bordered:				
	Made of paper:				
27542 11	Flat (except pressure-sensitive)	(NA)	89.5		
27542 13	Rolls (except pressure-sensitive)	(NA)	169.9	(NA)	290.2
27542 15	Pressure-sensitive (self-adhesive)	(NA)	4.9		
27542 17	Made of other materials, except cloth	(NA)	71.6		
	Printed rolls and sheets (except bags, envelopes, pouches, etc.) for packaging purposes:				
27542 32	Paper (single-web)	(NA)	37.9	17	77.7
27542 37	Other, including multiweb structures	(NA)	44.8	13	55.4
27542 00	Label and wrapper printing (gravure), n.s.k.	(NA)	15.8	(NA)	14.0
27543 —	Catalog and directory printing (gravure)				
27543 00	Catalogs and directories (including direct mail catalogs and telephone and business reference services directories)	(NA)	945.1	10	651.2
27545 —	Advertising printing (gravure)	(NA)	479.0	(NA)	286.4
27545 11	Direct mail, including circulars, letters, pamphlets, cards, and printed envelopes	(NA)		15	46.0
27545 45	Preprinted newspaper inserts (advertising supplements not regularly issued)	(NA)	474.5	6	236.0
27545 48	Other advertising printing, including shopping news, brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, display advertising, etc.	(NA)		7	4.2
27545 00	Advertising printing (gravure), n.s.k.	(NA)	4.5	(NA)	.2
27546 —	Other commercial printing (gravure)	(NA)	177.4	(NA)	102.7
27546 51	Decalcomanias and pressure-sensitives (self-adhesive), including bumper stickers, etc., except labels	(NA)	23.2	8	18.0
27546 95	All other general commercial printing, gravure, n.e.c. (including customized stationery and business cards)	(NA)	145.4	21	78.7
27546 00	Other commercial printing (gravure), n.s.k.	(NA)	8.8	(NA)	6.0
27540 —	Commercial printing, gravure, n.s.k.	(NA)	143.3	(NA)	160.4
27540 00	Commercial printing, gravure, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	113.9	(NA)	86.7
27540 02	Commercial printing, gravure, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	29.4	(NA)	73.7
2759- —	COMMERCIAL PRINTING, N.E.C.				
	Total	(NA)	9 181.2	(NA)	6 420.0
27591 —	Magazine and periodical printing (letterpress)	(NA)	157.8	(NA)	267.2
27591 12	Magazines and periodicals (except magazine and comic supplements for Sunday newspapers)	(NA)	86.8	41	148.0
27591 14	Magazine and comic supplements for Sunday newspapers	(NA)	31.5	(NA)	119.2
27591 00	Magazine and periodical printing (letterpress), n.s.k.	(NA)	39.5		
27592 —	Label and wrapper printing (letterpress)	(NA)	422.5	(NA)	483.8
	Printed labels, custom and stock, including bordered:				
	Made of paper:				
27592 11	Flat (except pressure-sensitive)	(NA)	42.7		
27592 13	Rolls (except pressure-sensitive)	(NA)	66.3	(NA)	226.0
27592 15	Marginally punched	(NA)	4.2		
	Pressure-sensitive:				
27592 17	Flat	(NA)	35.3		
27592 19	Rolls	(NA)	129.9		
27592 21	Made of other materials, except cloth	(NA)	17.5		
	Printed rolls and sheets (except bags, envelopes, pouches, etc.) for packaging purposes (printing only):				
27592 23	Paper (single-web)	(NA)	38.7	36	103.1
27592 27	Other (including multiweb structures)	(NA)	29.3	26	87.9
27592 00	Label and wrapper printing (letterpress), n.s.k.	(NA)	58.6	(NA)	86.8
27593 —	Catalog and directory printing (letterpress)	(NA)	224.3	(NA)	224.0
27593 12	Catalogs, including direct mail	(NA)	117.8	40	84.1
27593 18	Directories, including telephone and business reference services	(NA)	79.2	(NA)	121.2
27593 00	Catalog and directory printing (letterpress), n.s.k.	(NA)	27.3	(NA)	18.7

See footnotes at end of table.

Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—
Con.

(Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text.)

1987 product code	Product	1987		1982	
		Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)
2759 —	COMMERCIAL PRINTING, N.E.C.—Con.				
27594 —	Financial and legal printing (letterpress)	(NA)	258.4	(NA)	239.4
27594 11	SEC filing and prospectuses	(NA)	36.2	16	26.3
27594 13	Annual reports and other corporate financial printing	(NA)	47.6	23	20.8
27594 15	Other financial and legal printing (including insurance forms, security certificates, briefs, etc.)	(NA)	36.0	36	30.4
27594 17	Bank printing (including deposit slips, counter checks, business checks, imprinting of bank checks, etc.) (excluding checkbooks)	(NA)	97.0	34	122.1
27594 19	Bank form printing, including printing of passbooks, debit and credit slips, ledger and statement sheets, installment-loan coupon books, etc., excluding checkbooks	(NA)	24.4	19	16.9
27594 00	Financial and legal printing (letterpress), n.s.k.	(NA)	17.3	(NA)	23.0
27595 —	Advertising printing (letterpress)	(NA)	640.2	(NA)	737.5
27595 12	Direct mail (including circulars, letters, pamphlets, cards, and printed envelopes)	(NA)	209.0	70	66.9
	Display advertising:				
27595 14	Posters (including outdoor advertising, car cards, window)	(NA)	23.9	37	32.9
27595 16	Counter, floor displays, point-of-purchase, and other printed display material	(NA)	36.0	13	12.0
	Preprinted newspaper inserts (advertising supplements not regularly issued):				
27595 18	Rolls, including hi-fi and spectacular	(NA)	60.0	17	55.9
27595 20	Sections (2 pages or more)	(NA)	47.6	9	19.5
27595 22	Shopping news	(NA)	7.2	10	15.1
27595 24	Other advertising printing, including brochures, pamphlets, catalog sheets, circular folders, announcements, package inserts, book jackets, market circulars, magazine inserts, etc.	(NA)	176.4	93	60.4
27595 00	Advertising printing (letterpress), n.s.k.	(NA)	80.1	(NA)	83.8
27596 —	Other general job printing (letterpress)	(NA)	1 230.4	(NA)	798.2
27596 11	Scientific and technical recording charts and chart paper (containing preprinted grids and scale markings), except pen rule	(NA)	49.0	18	46.3
27596 13	Newspapers	(NA)	229.1	27	48.5
27596 15	Decalcomanias and pressure sensitives (self-adhesive), including bumper stickers, etc.	(NA)	15.6	23	17.0
27596 17	Business forms, not elsewhere classified, excluding blankbooks and looseleaf forms	(NA)	111.4	75	45.7
27596 19	Tags printed, including embossed	(NA)	61.6	36	81.8
27596 21	Ticket, coupon, and food and beverage check printing, including transportation and amusement	(NA)	38.2	27	42.9
27596 23	Calendars and calendar pads	(NA)	119.1	21	50.2
27596 25	All other general commercial letterpress printing, n.e.c. (including customized stationery and business cards)	(NA)	372.5	219	251.8
27596 00	Other general job printing (letterpress), n.s.k.	(NA)	233.9	(NA)	214.0
27597 —	Flexographic printing	(NA)	1 222.8	(NA)	759.6
27597 12	Magazine and comic supplements for Sunday newspapers	(NA)	55.5	(NA)	(²)
	Printed labels, custom and stock (including bordered):				
	Made of paper:				
27597 14	Flat (except pressure-sensitive)	(NA)	33.9	(NA)	405.2
27597 16	Rolls (except pressure-sensitive)	(NA)	60.3		
	Pressure-sensitive:				
27597 18	Flat	(NA)	54.0		
27597 20	Rolls	(NA)	522.3		
27597 22	Made of other materials, except cloth	(NA)	55.1		
27597 24	Printed rolls and sheets for packaging purposes (printing only):				
27597 26	Cellophane (single-web)	(NA)	11.1	42	69.1
27597 28	Paper (single-web)	(NA)	41.3	(²)	(²)
27597 30	Polyethylene (single-web)	(NA)	82.5	51	121.3
27597 32	Other, including multweb structures	(NA)	98.2	(²)	(²)
	Financial and legal printing (including SEC filing and prospectuses, and annual corporate reports), bank printing (except checkbooks), bank form printing (except manifold), and other financial and legal printing	(NA)	10.8		
27597 34	Advertising printing, including direct mail, display, preprinted newspaper advertisements (advertising supplements not regularly issued), and other printing designed to sell products or services	(NA)	18.6	(NA)	(²)
27597 36	Newspapers, except shopping news	(NA)	7.6		
27597 38	Other flexographic printing, n.e.c.	(NA)	63.6		
27597 00	Flexographic printing, n.s.k.	(NA)	108.0		
27598 —	Screen printing, except on textiles	(NA)	1 200.9	(NA)	696.9
	Printed labels, custom and stock (including bordered):				
	Made of paper:				
27598 11	Pressure-sensitive:				
27598 13	Flat	(NA)	72.9	(NA)	113.8
27598 15	Rolls	(NA)	44.2		
27598 17	Other paper labels	(NA)	8.6		
	Made of other materials, except cloth	(NA)	103.4		
	Advertising printing:				
27598 19	Display advertising:				
27598 21	Posters (including outdoor advertising, car cards, window)	(NA)	107.5	83	59.7
27598 23	Counter, floor displays, point-of-purchase, and other printed display material	(NA)	89.0	66	62.6
27598 25	Other advertising printing	(NA)	22.7	30	35.7
27598 27	Other general job printing:				
27598 29	Decalcomanias and pressure sensitives (self-adhesive), including bumper stickers, etc.	(NA)	261.4	133	185.8
27598 31	Printing on metal	(NA)	79.0	48	27.5
27598 33	Printing on glass or plastics containers for others	(NA)	57.9	22	33.5
27598 35	All other general commercial screen printing, n.e.c. (including customized printed stationery and business cards, excluding printing on apparel or fabrics)	(NA)	153.2	67	52.6
27598 00	Screen printing, except on textiles, n.s.k.	(NA)	201.0	(NA)	125.6

See footnotes at end of table.

Table 2. Product and Product Classes—Value of Receipts of All Producers: 1987 and 1982—
Con.

[Includes receipts for activities classified in this industry by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). For meaning of abbreviations and symbols, see introductory text]

1987 product code	Product	1987		1982	
		Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)	Number of companies with receipts of \$100,000 or more	Value of product receipts ¹ (million dollars)
2759—	COMMERCIAL PRINTING, N.E.C.—Con.				
27599 —	Engraving	(NA)	317.1	(NA)	228.2
27599 12	Security	(NA)	91.4	6	72.2
27599 22	Social	(NA)	32.3	34	45.4
27599 32	Commercial	(NA)	174.1	175	110.6
27599 00	Engraving, n.s.k.	(NA)	19.3	(NA)	—
2759A —	Nonimpact printing, using laser and ink-jet equipment:				
2759A 00	Nonimpact printing, using laser and ink-jet equipment	(NA)	109.7	(NA)	(*)
27590 —	Commercial printing, n.e.c., n.s.k.	(NA)	3 397.2	(NA)	2 549.2
27590 00	Commercial printing, n.e.c., n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	2 663.4	(NA)	1 947.4
27590 02	Commercial printing, n.e.c., n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	733.8	(NA)	601.8
2761—	MANIFOLD BUSINESS FORMS				
	Total	(NA)	6 718.2	(NA)	4 812.2
27612 —	Unit set forms:				
27612 00	Unit set forms, loose or bound (including all carbonless, carbonized, or carbon interleafed forms with an original and one copy or more, with or without stub, including food and beverage checks, multiple part tickets, etc.)	(NA)	1 417.1	406	1 187.7
27613 —	Manifold books:				
27613 00	Manifold books, including sales and payboard accounting systems	(NA)	280.9	71	238.5
27615 —	Custom continuous forms:				
27615 00	Custom continuous forms with or without carbon, marginally punched or not marginally punched (single or multiple copy custom forms usually printed on separate sheets which are fastened or unfastened)	(NA)	2 734.2	261	1 731.6
27617 —	Stock continuous forms:				
27617 00	Stock continuous forms (single or multiple copy stock forms usually printed on separate sheets which are fastened or unfastened)	(NA)	1 607.4	82	1 270.4
27610 —	Manifold business forms, n.s.k.	(NA)	678.6	(NA)	383.9
27610 00	Manifold business forms, n.s.k., typically for establishments with 5 employees or more (see note)	(NA)	455.3	(NA)	290.4
27610 02	Manifold business forms, n.s.k., typically for establishments with less than 5 employees (see note)	(NA)	223.3	(NA)	93.5

Note: In 1987 Census of Manufactures, data for establishments of small single-unit companies with up to 20 employees were estimated from administrative-record data rather than data actually collected from respondents. Employment cutoffs used for administrative records for each industry and shipments figures are included in code ending with "002". In both 1987 and 1982 Censuses of Manufactures, products not completely identified on standard forms were coded in appropriate product class (five-digit) followed by "00" or to appropriate product group code (four-digit) followed by "000".

¹Data reported by all producers, not just those with receipts of \$100,000 or more.

²For 1982, product code 2759200 and product classes 27591, 2759J, 27594, 27595, and 27596 included some printing by flexographic process. Thus, 1987 data for letterpress product codes (5- and 7- digit) may not be completely comparable with 1982 data.

³For 1982, product code 2759726 was included in product code 2759223.

⁴For 1982, product code 2759730 was included in 2759227.

⁵For 1982, product code 2759726 may include some printing by letterpress process.

⁶Product class 2759A is new for 1987. No prior year data are available.

Table 3. Materials Consumed by Kind: 1987 and 1982

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987 delivered cost (million dollars)	1982 delivered cost (million dollars)
	INDUSTRY 2752, COMMERCIAL PRINTING, LITHOGRAPHIC		
	Materials, parts, and supplies	12 126.9	7 112.9
262112	Newsprint	885.2	320.3
	Uncoated paper:		
262116	Sheets	705.6	643.6
262117	Rolls	1 058.7	606.3
	Coated paper:		
262132	Sheets	1 018.6	757.2
262134	Rolls	1 580.3	934.7
220011	Cloth and nonwoven fabrics for hardbound book covers	7.9	6.8
289101	Glues and adhesives	44.5	17.8
	Printing inks:		
289311	Letterpress, including news	40.9	32.8
289323	Lithographic (offset)	447.8	343.2
289303	Flexographic	9.0	37.3
289304	Other, including gravure and screen process	34.7	
286153	Unexposed diazo lithographic plates	44.9	
279610	Other lithographic plates, exposed or unexposed	77.1	137.8
330006	Metal for lithographic plates	51.5	22.4

See footnotes at end of table.

Table 3. Materials Consumed by Kind: 1987 and 1982—Con.

[Includes cost of materials consumed or put into production by establishments classified only in this industry. For further explanation, see Cost of Materials in appendix. For meaning of abbreviations and symbols, see introductory text]

1987 material code	Material	1987 delivered cost (million dollars)	1982 delivered cost (million dollars)
INDUSTRY 2752, COMMERCIAL PRINTING, LITHOGRAPHIC— Con.			
279632	Plates for flexographic printing	7.4	(⁹)
386101	Light-sensitive films and papers	139.6	120.6
267231	Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc.	27.1	13.2
970099	All other materials and components, parts, containers, and supplies	1 296.7	21 195.6
971000	Materials, parts, and supplies, n.s.k. ¹	4 639.4	1 843.3
INDUSTRY 2754, COMMERCIAL PRINTING, GRAVURE			
	Materials, parts, and supplies	1 413.6	(NA)
262112	Newsprint	114.4	
	Uncoated paper:		
262116	Sheets	1.2	
262117	Rolls	225.0	
	Coated paper:		
262132	Sheets	2.0	
262134	Rolls	380.6	
289101	Glues and adhesives	8.2	(NA)
	Printing inks:		
289311	Letterpress, including news	12.1	
289323	Lithographic (offset)	23.3	
289303	Flexographic	7	
289304	Other, including gravure and screen process	263.9	
386101	Light-sensitive films and papers	5.6	
267231	Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc.	(⁹)	
970099	All other materials and components, parts, containers, and supplies	3171.1	
971000	Materials, parts, and supplies, n.s.k. ¹	205.5	
INDUSTRY 2759, COMMERCIAL PRINTING, N.E.C.			
	Materials, parts, and supplies	3 233.6	(NA)
262112	Newsprint	121.6	
	Uncoated paper:		
262116	Sheets	123.9	
262117	Rolls	197.2	
	Coated paper:		
262132	Sheets	109.7	
262134	Rolls	153.6	
220011	Cloth and nonwoven fabrics for hardbound book covers	2.8	
289101	Glues and adhesives	14.0	
	Printing inks:		(NA)
289311	Letterpress, including news	19.3	
289323	Lithographic (offset)	17.0	
289303	Flexographic	30.9	
289304	Other, including gravure and screen process	23.8	
386153	Unexposed diazo lithographic plates	5.1	
279610	Other lithographic plates, exposed or unexposed	5.4	
330006	Metal for lithographic plates	4.0	
279632	Plates for flexographic printing	18.7	
386101	Light-sensitive films and papers	14.6	
267231	Pressure-sensitive base stock, self-adhesive, including paper, film, foil, etc.	237.8	
970099	All other materials and components, parts, containers, and supplies	484.5	
971000	Materials, parts, and supplies, n.s.k. ¹	1 649.7	
INDUSTRY 2761, MANIFOLD BUSINESS FORMS			
	Materials, parts, and supplies	3 128.9	2 378.7
262131	Coated papers	162.6	41.4
262102	Groundwood, book, bond, writing, ledger, and manifold paper, uncoated	1 469.8	1 157.5
262150	Bristol, cover, text, and other specialty paper, uncoated	26.5	32.5
289301	Printing inks, complete formulations (all types)	30.0	21.7
	Carbon paper:		
262164	Carbonizing tissue stock for conversion into one-time carbon paper	37.5	72.5
395523	One-time carbon paper	116.1	145.3
262163	Carbonless paper	476.5	255.6
970099	All other materials and components, parts, containers, and supplies	342.7	335.6
971000	Materials, parts, and supplies, n.s.k. ¹	467.2	316.8

¹Total cost of materials of establishments that did not report detailed materials data, including establishments that were not mailed a form.

²For 1982, material code 279632 was included in 970099.

³For 1987, material code 267231 is included in 970099.

APPENDIX

Scope and Coverage and Explanation of Terms

GENERAL

The 1987 Census of Manufactures is the 32nd census of manufacturing establishments conducted in the United States. For 1987, it was conducted as part of the economic censuses, which included the censuses of mineral industries, construction industries, retail and wholesale trades, service industries, selected transportation activities, and minority-owned and women-owned businesses, under authority of title 13 of the United States Code. Title 13 specifies that an economic census be conducted every 5 years to cover years ending in 2 and 7.

SCOPE AND COVERAGE

Establishment Basis of Reporting

The census of manufactures is conducted on an establishment basis. All manufacturing establishments with one paid employee or more at any time during the year are covered by the census of manufactures. Therefore, a company operating at more than one location is required to file a separate report for each location. This report excludes information for separately operated administrative offices, warehouses, garages, and other auxiliary units which service manufacturing establishments of the same company. Where these auxiliary operations are conducted at the same location as the manufacturing operation, they are usually included in the report for the operating manufacturing establishment.

Use of Administrative Records

From a universe of approximately 350,000 manufacturing establishments in the 1987 Census of Manufactures, approximately 150,000 small single-establishment companies were excused from filing reports. Selection of the small establishment nonmail cases was done on an industry-by-industry basis. A variable cutoff was used to determine those establishments for which administrative records were to be used in place of a census report. The cutoffs were selected so the administrative-record cases would account for approximately 3 percent or less of the value of shipments for the industry. These cutoffs were then adjusted so that all single-establishment companies with less than 5 employees were excluded from the mail canvass, while all establishments with more than 20 employees were included. Where establishments in the 5 to 20 employee size range were included in the mail canvass, an abbreviated census form was frequently used.

For these nonmail establishments, (and a small number of larger establishment whose reports were not received at the time the data were tabulated) data on employment, payroll, and receipts were obtained from administrative records of other government agencies rather than from census forms. The administrative-record information was then used in conjunction with industry averages to estimate the data for these establishments. The value of shipments and cost of materials were not distributed among specific products and materials but were included in the product and material "not specified by kind" (n.s.k.) categories.

EXPLANATION OF TERMS

Number of establishments and companies—A separate report was required for each manufacturing establishment (plant) with one employee or more. An establishment is defined as a single physical location where manufacturing is performed. A company, on the other hand, is defined as a business organization consisting of one establishment or more under common ownership or control.

All employees—Includes all full-time and part-time employees on the payrolls at any time during the year. Included are all persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees; proprietors and partners of unincorporated firms are excluded. The "all employees" number is the average number of production workers plus the number of other employees in mid-March. The number of production workers is the average of those for midmonth payroll periods of March, May, August, and November.

Production workers—Includes workers up through the working-supervisor level engaged in fabricating, processing, assembling, inspecting, receiving, packing, warehousing, shipping (but not delivering), maintenance, repair, janitorial, guard services, product development, auxiliary production for plant's own use (e.g., power-plant), recordkeeping, and other closely associated services. Truckdrivers delivering ready-mixed concrete are also included in production workers.

Other employees—Includes nonproduction personnel, including those engaged in the following activities: supervision above working-supervisor level, sales (including driver/salespersons), sales delivery (truckdrivers and helpers), advertising, credit collection, installation and

servicing of own product, clerical and routine office functions, executive, purchasing, finance, legal, personnel (including cafeteria, etc.), professional, and technical employees.

Payroll—Includes the gross earnings for the “employees” defined above, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees’ Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Respondents were told that in reporting they could follow the definition of payrolls used for calculating the Federal withholding tax.

Production-worker hours—Covers hours worked or paid for at the plant, including actual overtime hours (not straight-time equivalent hours). It excludes hours paid for vacations, holidays, or sick leave when the employee was not at the plant.

Cost of materials—Refers to direct charges actually paid or payable for items consumed or put into production during the year, including freight charges and other direct charges incurred by the establishment in acquiring these materials. It includes the cost of materials or fuels consumed, regardless of whether they were purchased by the individual establishment from other companies, transferred to it from other establishments of the same company, or withdrawn from inventory during the year.

The important components of this cost item are (a) all raw materials, semifinished goods, parts, containers, scrap, and supplies put into production or used as operating supplies and for repair and maintenance during the year; (b) electric energy purchased; (c) fuels consumed for heat, power, or generating electricity; (d) work done by others on materials or parts furnished by manufacturing establishments (contract work); and (e) products bought and resold in the same condition.

Specific materials consumed (table 3)—In addition to the total cost of materials which every establishment was required to report, information was also collected for most manufacturing industries on the consumption of major materials used in manufacturing. These inquiries were restricted to those materials which were important parts of the cost of production in a particular industry and for which cost information was available from manufacturers’ records. Establishments consuming less than a specified amount (usually \$10,000) of a specific material were not requested to report consumption of that material separately. Also, the cost of materials for the small establishments for which administrative records were used was estimated as “not specified by kind” (n.s.k.).

Value of shipments and other receipts—Generally refers to received or receivable net selling values, f.o.b. plant (exclusive of freight and taxes), of all products shipped, both primary and secondary, as well as all

miscellaneous receipts such as receipts for contract work performed for others, installation and repair receipts, sale of scrap, and sale of products bought and resold without further processing. Included are all items made by or for the establishment from materials owned by it whether sold, transferred to other plants of the same company, or shipped on consignment. The net selling value of products made in one plant on a contract basis from materials owned by another was reported by the plant providing the materials.

In a few industries, the value of production or value of work completed is used instead of value of shipments. These industries are identified in the introduction and are footnoted in table 1.

In the case of multiunit companies, the manufacturer was requested to report the value of products transferred to other establishments of the same company at full economic or commercial value, that is, including not only the direct costs of production but also a reasonable proportion of “all other costs” (including company overhead and profit).

Shipments or production of individual products (table 2)—In the 1987 census, detailed shipment information was collected for approximately 11,000 individual products. These products are identified by a seven-digit code and are grouped into approximately 1,500 classes of products, which in turn are primary to 459 four-digit industries. Data at the five-digit product-class level have been collected each year as part of the annual survey of manufactures. Information at the seven-digit level, collected for many industries in the current industrial reports program, is not included in this table.

Value added by manufacture—This measure of manufacturing activity is derived by subtracting the cost of materials, supplies, containers, fuel, purchased electricity, and contract work from the value of shipments for products manufactured plus receipts for services rendered. The result of this calculation is then adjusted by the addition of value added by merchandising operations (that is, the difference between the sales value and cost of merchandise sold without further manufacturing, processing, or assembly) plus the net change in finished goods and work-in-process inventories between the beginning and end of the year.

For those industries where value of production is collected instead of value of shipments (see footnote in table 1), value added is adjusted only for the change in work-in-process inventories between the beginning and end of the year. For those industries where value of work done is collected, the value added does not include an adjustment for the change in finished goods or work-in-process inventories.

Value added avoids the duplication in the figure for value of shipments which results from the use of products of some establishments as materials by others. Value

added is considered to be the best value measure available for comparing the relative economic importance of manufacturing among industries and geographic areas.

Expenditures for new plant and equipment—Establishments in operation and any known plants under construction were asked to report their expenditures for (a) permanent additions and major alterations to manufacturing establishments and (b) new machinery and equipment used for replacement and additions to plant capacity if they are of the type for which depreciation accounts are ordinarily maintained.

These totals exclude expenditures for used plant and equipment, expenditures for land, and cost of maintenance and repairs charged as current operating expenses. Data for used plant and equipment will be published in the final industry bulletin.

End-of-year inventories—Comprised of (a) finished products; (b) work-in-process; and (c) materials, supplies, fuels, etc. Beginning in 1982, respondents were asked to report their inventories at (the lower of) cost or market prior to adjustment to LIFO cost. This is a change from prior years in which respondents were permitted to value their inventories using any generally accepted accounting method.

Therefore, 1982 through 1987 data for inventories are not strictly comparable to prior-year data.

Specialization and coverage ratios—An establishment is classified in a particular industry if its shipments of primary products of the industry exceed in value its shipments of the products of any other single industry. An establishments' shipments include those products assigned to an industry (primary products), those considered primary to other industries (secondary products), and receipts for miscellaneous activities (merchandising, contract work, resales, etc.). The following ratios have been developed to measure the relationship of primary product shipments to the data on shipments for the industry shown in table 1 and data on product shipments shown in table 2.

Specialization ratio—Represents the ratio of primary product shipments to total product shipments (primary and secondary, excluding miscellaneous receipts) for the establishments classified in the industry.

Coverage ratio—Represents the ratio of primary products shipped by the establishments classified in the industry to the total shipments of such products that are shipped by all manufacturing establishments, wherever classified.